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EXAMINER

BAREFORD, KATHERINE A

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/613,735

**Applicant(s)**

RISING, LARRY

**Examiner**

Katherine A. Bareford

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) 1-23 and 49-74 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/04</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-23 and 49-74, drawn to an apparatus, classified in class 118, subclass 300.
  - II. Claims 24-48, drawn to a method, classified in class 427, subclass 345.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used for another and materially different process, such as cleaning a surface.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. Tope-McKay on September 13, 2004 a provisional election was made with traverse to prosecute the invention of Group II, claims 24-48. Affirmation of this election must be made by applicant in replying to this Office action. Claims

1-23 and 49-74 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### *Specification*

5. The disclosure is objected to because of the following informalities: at page 10, lines 12-15, reference to an Appendix A is provided. However, no Appendix A has been provided with the application, thus making it impossible to understand what materials are referred to.

Appropriate correction is required.

### *Claim Objections*

6. Claims 24, 25, 27, 28, 31-36, 39-41 and 43-45 are objected to because of the following informalities: (1) in claim 24, line 6, "remaining chemical solution" is referred to. However, earlier in the claim only "chemical mixture" or "chemical solute" is provided for basis. Also, in claim 24, lines 5-6, "a substrate" should be "the substrate" for proper antecedent basis. (2) in claim 25, applicant needs to provide actually using the selected applicator to apply the mixture for the claim to actually require the use of the applicator. (3) in claim 27, it appears from the specification that the squeeze roller is used to remove the portion of the chemical mixture, not before the removing (see pages 10-11). (4) in claim 28, it appears from the specification that the heat exchanger actually performs the evaporating and is not used prior the to the claimed evaporating step (see page 11). (5) in claim 31, applicant needs to actually provide using the blower to perform the preventing of vapors from escaping. (6) in claim 32, it appears from the

specification that the using of the separator occurs during the act of removing, not before (see page 13). (7) in claim 33, there is no basis for the "removed non-aqueous solvent" – claim 30 refers to vapor. (8) in claim 34, lines 6-7, there is no support for "the portion of chemical mixture" being part of the condensed solvent vapor. (9) in claim 36, it appears that the water spray mechanism actually performs the condensing, not acts before the condensing. In claim 36, there is also no support for the "re-boiler" tank of line 2. (10) in claim 35, it appears that the heat exchanger performs the heating the collected solution, not acts before. (11) in claim 39, applicant needs to provide actually using the selected applicator to apply the mixture for the claim to actually require the use of the applicator. (12) in claim 40, it appears from the specification that the squeeze roller is used to remove the portion of the chemical mixture, not before the removing (see pages 10-11). (13) in claim 41, it appears from the specification that the heat exchanger actually performs the evaporating and is not used prior to the claimed evaporating step (see page 11). (14) in claim 43, applicant needs to actually provide using the blower to perform the preventing of vapors from escaping. (15) in claim 44, it appears from the specification that the using of the separator occurs during the act of removing, not before (see page 13). (16) in claim 45, it appears that the heat exchanger performs the heating the collected solution, not acts before.

7.

Appropriate correction is required.

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8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 30-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 30, lines 2-3, it is confusing as to what is required, since the claim requires both preventing vapors from escaping and removing the vapors. Furthermore, it is unclear where the "remaining" solvent vapors come from. Also, at lines 1-2 "an act: of preventing" should apparently be "an act of preventing".

In claims 31 and 43, it is confusing as to how the "blower apparatus" could be either a fan or a blower, since it would appear that the "blower" would be either "blower" or not.

The other dependent claims do not cure the defects of the claims from which they depend.

### *Double Patenting*

10. Claims 24 and 25 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12-14 of copending Application No. 10/611, 746. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 12-14 of '746 (which depends from claim 2 and through claim 2, parent claim 1) requires all the features of claims 24 and 25 and more. A chemical mixture is formed comprising a non-aqueous solvent (the NPB) and a chemical solute

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(the fluorine containing compositions), this is applied to a substrate by foaming or spraying to form a wet substrate, and then the non-aqueous solvent is removed from the wet substrate, leaving the substrate with remaining chemical solution.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

*Claim Rejections - 35 USC § 102*

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Vitalis (US 2717877).

Vitalis teaches a method for applying a chemical solution to a substrate. See column 14, lines 45-65. A chemical mixture is formed comprising a non-aqueous solvent (isopropanol and perchloroethylene) and a chemical solute (sodium bisulfite-addition product). Column 14, lines 53-60. The chemical mixture is applied to a substrate of fabric to form a wet substrate. Column 14, lines 55-65. The non-aqueous solvent is removed from the wet substrate, leaving a substrate with remaining chemical solution. Column 14, lines 55-67 (the squeeze rolls, followed by heating).

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13. Claims 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Dawson (US 3617211).

Dawson teaches a method for applying a chemical solution to a substrate. See column 6, line 70 through column 7, line 15. A chemical mixture is formed comprising a non-aqueous solvent (phenoxyethanol, ethylene carbonate and ethylene glycol monomethyl ether) and a chemical solute (Nabor Orange R base). Column 6, line 70 through column 7, line 5. The chemical mixture is applied to a substrate of fabric to form a wet substrate. Column 7, lines 1-10. The non-aqueous solvent is removed from the wet substrate, leaving a substrate with remaining chemical solution. Column 7, lines 1-10 (the squeeze rollers, followed by heating).

Claim 25: the coating can be by padding, which would require the presence of a padding applicator. Column 7, lines 1-10.

#### *Claim Rejections - 35 USC § 103*

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vitalis as applied to claim 24 above, and further in view of Dawson (US 3617211).



Vitalis teaches all the features of this claim, as discussed in the 35 USC 102(b) rejection using Vitalis above, except the padding applicator.

However, Dawson teaches a method for applying a chemical solution to a substrate. See column 6, line 70 through column 7, line 15. A chemical mixture is formed comprising a non-aqueous solvent (phenoxyethanol, ethylene carbonate and ethylene glycol monomethyl ether) and a chemical solute (Nabor Orange R base). Column 6, line 70 through column 7, line 5. The chemical mixture is applied to a substrate of fabric to form a wet substrate. Column 7, lines 1-10. The non-aqueous solvent is removed from the wet substrate, leaving a substrate with remaining chemical solution. Column 7, lines 1-10 (the squeeze rollers, followed by heating). The coating can be by padding, which would require the presence of a padding applicator. Column 7, lines 1-10.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vitalis to use a padding applicator as shown by Dawson, with an expectation of providing a desirable coated fabric, because Vitalis teaches to coat a fabric followed by squeezing to remove excess solvent and heating, and Dawson teaches that a desirable application method when coating fabric to be followed by squeezing to remove excess solvent and heating is padding.

16. Claims 26-30 and 32-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vitalis as applied to claim 24 above, and further in view of Kinsley, Jr. (US 4421794).

Vitalis teaches all the features of these claims, as discussed in the 35 USC 102(b) rejection using Vitalis above, except the solvent removing features. Vitalis does teach using

squeeze rollers to remove a portion of the chemical mixture from the wet substrate prior to evaporating solvent from the substrate by heating, as required by claims 26-27. See column 14, lines 55-65.

However, Kinsley teaches a method for removing non-aqueous solvent from a substrate, which substrate can be paper or a fabric. Column 1, lines 10-15 and column 6, lines 39-45. After a substrate has been coated with a chemical mixture of a coating material and a solvent, the solvent is to be removed. Column 3, lines 55-65. The coated substrate is passed into a chamber which can be at reduced pressure, which would lower a boiling point of the solvent. Column 7, lines 5-15, column 5, lines 45-65, and column 8, lines 35-55. Then the non-aqueous solvent is then evaporated into a solvent vapor. Column 2, line 60 through column 3, line 10. A steam based heat exchanger is used to evaporate the solvent (the steam is a heat exchanger heating the solvent). Column 3, lines 55-65. Vapors are prevented from escaping to the extent that a negative pressure is created. Column 5, lines 45-65. Solvent vapors that have been evaporated into the steam are removed from the system. Column 5, line 65 through column 6, line 15 and column 7, lines 20-40. Removed solvent is collected. Column 5, line 65 through column 6, line 15 and column 7, lines 20-40. The collecting can include pushing the solvent vapor into a scrubber chamber. Column 5, line 65 through column 6, line 15 and column 7, lines 20-40 (the condensing and distillation/decanting). This would occur via the negative pressure, since such pressure is present. Column 5, lines 45-65. The vapor is condensed into a condensed liquid solvent solution. Column 5, line 65 through column 6, line 15 and column 7, lines 20-40. This is collected and then heated to revaporize the solvent, the revaporized solvent is then cooled and

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condense to recondensed solvent, which is collected. Column 5, line 65 through column 6, line 15 and column 7, lines 20-40 (the condensing and distillation/decanting). A water mechanism is used as a condenser apparatus. Column 7, lines 25-35. Kinsley also teaches that a separator can be present in the process to provide optimal steam which would remove mist, since water is removed. Column 6, lines 45-60. This system provides for a easy and efficient removal of solvent. Column 2, lines 35-65.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vitalis to use a <sup>steam</sup>~~steam~~ heated system solvent removal system as the oven after squeeze rolling as shown by Kinsley, with an expectation of providing a desirable coated fabric, because Vitalis teaches to coat a fabric followed by squeezing to remove excess solvent and heating in a steam oven, and Kinsley teaches that a desirable application method when coating fabric with a solvent containing material is to heat in an oven and contact with steam <sup>to</sup>~~to~~ remove solvent from the coating to provide an easy and efficient removal of solvent. It would further have been obvious to use a water spray mechanism to condense the solvent vapor as in claim 35 in the process of Vitalis in view of Kinsley with an expectation of desirable coating results, because Kinsley teaches to condense by adding cold water, which would be inclusive of adding the cold water by spraying. It would further have been obvious to modify Vitalis in view of Kinsley to use a steam heat based exchanger to heat the "re-boiler tank" in the processes of distillation/decanting as in claim 36 with an expectation of providing desirable heating, because Kinsley teaches distillation/decanting of the recovered solvent vapors and such a process would require heating in a "tank", and Kinsley further teaches heating with steam, such that steam would be present to

provide heating. It further would have been obvious to modify Vitalis in view of Kinsley to provide pumping of the recovered solvent from a recovery tank (which would be provided to hold the recovered solvent) to a mix tank to be provided with the material to be coated and that this mix is further pumped to the application apparatus as in claims 37-38, because Kinsley provides for solvent recovery, complete with distillation/decanting which provides a clean solvent that allows for reuse, and it would be obvious to provide for reuse in the coating system itself or an another applicator of the coating system to allow cost savings on solvent.

17. Claims 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vitalis in view of Kinsley as applied to claim 26-30 and 32-38 above, and further in view of Dawson (US 3617211).

Vitalis in view of Kinsley teaches all the features of these claims except the padding applicator.

However, Dawson teaches a method for applying a chemical solution to a substrate. See column 6, line 70 through column 7, line 15. A chemical mixture is formed comprising a non-aqueous solvent (phenoxyethanol, ethylene carbonate and ethylene glycol monomethyl ether) and a chemical solute (Nabor Orange R base). Column 6, line 70 through column 7, line 5. The chemical mixture is applied to a substrate of fabric to form a wet substrate. Column 7, lines 1-10. The non-aqueous solvent is removed from the wet substrate, leaving a substrate with remaining chemical solution. Column 7, lines 1-10 (the squeeze rollers, followed by heating).

The coating can be by padding, which would require the presence of a padding applicator. Column 7, lines 1-10.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vitalis in view of Kinsley to use a padding applicator as shown by Dawson, with an expectation of providing a desirable coated fabric, because Vitalis in view of Kinsley teaches to coat a fabric followed by squeezing to remove excess solvent and heating, and Dawson teaches that a desirable application method when coating fabric to be followed by squeezing to remove excess solvent and heating is padding.

18. Claims 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vitalis in view of Kinsley as applied to claim 26-30 and 32-38 above, and further in view of Ellison et al (US 4136636).

Vitalis in view of Kinsley teaches all the features of these claims except the blower

However, Ellison teaches that when moving a coated substrate an oven area it is known to use a fan to establish a slightly negative pressure, causes inward gas flow, and would prevent vapors from escaping. Column 6, lines 1-45 and column 4, lines 1-20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vitalis in view of Kinsley to use a blower fan as shown by Ellison, with an expectation of providing a desirable coated fabric, because Vitalis in view of Kinsley teaches to coat a fabric followed by squeezing to remove excess solvent and then passage into an oven with a

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negative pressure, and Ellison teaches that providing fans at an oven entrance to provide a negative pressure. As the negative pressure pulls gases in, it would prevent vapors from exiting.

19. Claimss 43-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vitalis in view of Kinsley and Dawson as applied to claim 39-42 above, and further in view of Ellison et al (US 4136636).

*and Dawson*  
Vitalis in view of Kinsley teaches all the features of these claims except the blower.

However, Ellison teaches that when moving a coated substrate an oven area it is known to use a fan to establish a slightly negative pressure, causes inward gas flow, and would prevent vapors from escaping. Column 6, lines 1-45 and column 4, lines 1-20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vitalis in view of Kinsley *and Dawson* to use a blower fan as shown by Ellison, with an expectation of providing a desirable coated fabric, because Vitalis in view of Kinsley *and Dawson* teaches to coat a fabric followed by squeezing to remove excess solvent and then passage into an oven with a negative pressure, and Ellison teaches that providing fans at an oven entrance to provide a negative pressure. As the negative pressure pulls gases in, it would prevent vapors from exiting.

### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:30-4:00) with the First Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (571) 272-1415. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Other inquiries can be directed to the Tech Center 1700 telephone number at (571) 272-1700.

Furthermore, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
KATHERINE BAREFORD  
PRIMARY EXAMINER